

ABSTRACT

The present invention provides an inactive Ca^{2+} /calmodulin-dependent protein kinase II α (CaMKII α) knockin animal in which only the protein kinase activity of CaMKII α has been specifically impaired. Since CaMKII α is considered to be involved in higher brain functions including learning and memory, and inhibit epileptic seizure and brain disorders caused by ischemia, the inactive CaMKII α knockin animal of the present invention is widely usable for various studies of the brain and nerve, such as the studies of mechanisms of learning disability, dysmnnesia, epileptic seizure and brain disorders.